

From boatanchors@theporch.com Sat May 6 02:17:19 1995  
Date: Fri, 5 May 1995 21:17:19 -0500  
Message-Id: <199505051459.HAA03096@ix2.ix.netcom.com>  
From: w0ogh@ix.netcom.com (Larry Godek)  
Subject: 1L6 tubes

I don't have padgett's email address to tell him I found some 1L6 tubes. Anyone else need some?

Larry W00GH

From boatanchors@theporch.com Sat May 6 02:25:50 1995  
Date: Fri, 5 May 1995 21:25:50 -0500  
Message-Id: <9505051723.AA15739@ihurry.ih.att.com>  
From: Michael.J.Knudsen@att.com  
Subject: re 390 power supply

Wonder why an R390 needs a 6080 series regulator, when the R390A gets along fine with no regulation except the gas tube in the oscillator B+? The CV-157 SSB converter does use a 6080 pass tube, but that's with two 5V4s feeding 40-odd tubes (compared to the 390's piddly little 20-odd tubes :-)

Anyway, I wouldn't want a \*switching\* regulator anywhere near a fine rcvr like this. Filtering out all the hash would require sealing the thing in copper boxes or something equally radical. I'd say use analog pass transistors with heat sinks -- it's still less heat than the original 6080 threw off with its heater added in.

I do agree that a 390 that's already been butchered beyond museum vintage restoration is a great vehicle for experimentation.

73, mike knudsen w9nrd

From boatanchors@theporch.com Sat May 6 02:18:24 1995  
Date: Fri, 5 May 1995 21:18:24 -0500  
Message-Id: <199505051504.IAA03785@ix2.ix.netcom.com>  
From: w0ogh@ix.netcom.com (Larry Godek)  
Subject: 75A-4 filter

In the January 1964 issue of CQ mag, page 50 is an article called "A Wideband Filter for the 75A-4. How to do it. Seems there was some digression concerning filters for them here some time ago. Just stumbled across it and thought I would pass it on.

On a 2nd note, re the swan identification thread earlier, in the same  
issure on page 90 is a picture of the Swan 240. Did the inquiring  
individual ever determine whether his was a "140" or a "240"?

Thanks for listening

Larry W00GH

From boatanchors@theporch.com Sat May 6 02:19:41 1995  
Date: Fri, 5 May 1995 21:19:41 -0500  
Message-Id: <17C734502CD@s1.xetron.com>  
From: "Jack Giehl" <JACKG@s1.xetron.com>  
Subject: 75A4 Meters / KWS1 Meter Want

Dear BA enthusiasts,  
Sean wrote:

> My A-4, s/n 4978, has the "pre5000" black and red meter.  
> Do any of you know if this is original, indicating Collins used both  
> .....Also, does anyone know where I can get a replacement dial drum?  
> I've recently purchased an overlay, but the art work is poor, and I've  
> heard the whole drum is available.

Sean, I bought a replacement overlay from K5GIT for about \$5.00.  
The replacement overlay I bought is on Scotch brand material.  
It contains an adhesive and is easy to apply, you just need to  
make sure that it is properly lined up as you roll it on.  
It looks really nice, just like brand new. My meter is black only,  
and my 75A4 s/n is in the 5600 range. I believe the red/black  
meter was supplied on the earlier 75A4 receivers.

BTW, I managed to get a meter together for my defective  
KWS-1 multi-meter, but it is a temporary thing until I can  
find a good replacement meter, such as the S-meter in  
the 75A4. Anyone have a spare meter or parting out a 75A4?

Jack

73,

=====

Jack, WB8BFS

jackg@xetron.com Loveland, Ohio (near Cincinnati)

"Peak the grid, dip the plate, and keep the fire in the wire."

=====

From boatanchors@theporch.com Sat May 6 02:02:57 1995  
Date: Fri, 5 May 1995 21:02:57 -0500  
Message-Id: <m0s7Lip-00001gC@next3.acme.ist.ucf.edu>  
From: clarke@acme.ist.ucf.edu (Thomas Clarke)  
Subject: A Freeby

I saw an offer of freebies on r.r.s  
and got this desription of what appears to be an  
old GE 2-way.

He says he will ship, but I can't use it. I had visions  
of a really old 2-meter rig with tuned lines or something.  
Probably best for someone near Maryland.

DO NOT REPLY TO ME, THE PHILANTHROPIST IS

Rick -- N3PWD/AA  
Parkville, MD USA  
rexrix@wam.umd.edu  
410.661.2088 voice/fax  
410.813.0581 pager

It's an old rig. Picture old in your mind  
and add 5 more years - great now you have  
an idea. Oh, wait a sec....just re-checked the  
data-plate again....a wire was blocking some

of the info.....I'll post the updated specs....  
let's see;

General Electric  
Transmitter/Receiver ( That's great I thought it  
was TX only! )  
Output: 7 - 10 Watts  
Model: 4ESI2A2  
Freq: 148 - 174 MHz  
Weight: 37# ( add couple more for shipping )  
Color: Blue  
Dimensions: 19 x 10 x 7 inches

Looks complete except, it's definitely missing  
two (2) tubes that sit on 7 - pin bases.

DO NOT REPLY TO:

Tom Clarke, KE4VFH

From boatanchors@theporch.com Sat May 6 02:27:29 1995  
Date: Fri, 5 May 1995 21:27:29 -0500  
Message-Id: <9505051741.AA15834@ihurry.ih.att.com>  
From: Michael.J.Knudsen@att.com  
Subject: Re: CE 100/200V questions

Bobbi -- the mathematical function that gives 90-degree phase shift is called the Hilbert Transform. Like the Laplace and Fourier, it has nothing to do with transformers -- back when we worked on DSP at Bell Labs here, I'd threaten to walk into the nearest Rat Shack and ask for a Hilbert transformer :-)

Mathematically you Hilbert-transform a signal by interchanging its real and imaginary parts. In practice it can be done digitally as an FIR filter with response of  $1/t$ . But we had a simpler digital version that used only about 4 poles and zeros and was probably derived from those good old RC networks in the ARRL Handbook.

I think the Dome network, found in another radio handbook, used 2 or 3 stages of triodes as well as R/C.s.

BTW, an eye-catching trick with any "Hilbert transformer" network is to connect the outputs to X and Y scope inputs, and feed it your speech, rcvd audio, CD player, whatever. Each sinusoidal frequency in the mix tries to draw a circle on the scope, but all the frequencies interact and you get some neato designs.

Also, given a mono signal, the two outputs make great synthetic stereo when fed to separate ears.

I've been wondering whether the selectable-sideband synchronous detectors used in modern SW receivers don't use the phasing method to filter out the unwanted sideband? 73, mike k. w9nrd

From boatanchors@theporch.com Fri May 5 11:06:43 1995  
Date: Fri, 5 May 1995 06:06:43 -0500  
Message-Id: <Pine.3.89.9505050529.A23156-01000000@indy2>  
From: "Roberta J. Barmore" <rbarmore@indynet.indy.net>  
Subject: Re: CE 100/200V questions...

Hi!

Barry mentions the Dome Network--like so many filters, named after either the developer or the man behind the math--as the name of the 90-degree wideband AF phase-shift network (aka an "all-pass filter," for those keeping stats). That's new to me--there \*is\* a nice mathematical function that cranks out two outputs at 90d to each other, widely exploited in digital filters, but it's known by a different name (which, of course, I have forgotten!). So far as I know, the "digital" version cannot be realized with LCR or active analog-filter designs. Dome's RC 90d three-port allpass is \*remarkably\* clever. The larger it gets, the better it works if you can accept the increased insertion loss. (See recent ARRL handbooks for a really extreme example, 20-element or larger!)

The Barker & Williamson unit is a 2Q4, per old ARRL Handbooks. So those of us who thunk it might be a 3Q4 were close, and should probably be given a 3V power pentode (quarter watt!) with a 7-pin mini base for our efforts. :)

The Millen unit has a typical Millen six-digit number, and is built in a large rectangular can, similar to the company's old plug-in shielded grid coil assemblies and some of their bigger IF transformers.

73,  
--Bobbi

From boatanchors@theporch.com Sat May 6 02:22:32 1995  
Date: Fri, 5 May 1995 21:22:32 -0500  
Message-Id: <199505051537.LAA13151@cc01du.unity.ncsu.edu>  
From: rdkeys@unity.ncsu.edu  
Subject: Re: conversion of Command Set

>  
> While Bobs remarks are accurate, I have feelings about bending the  
> relay parts around and soldering or tacking wire into the connectors at  
> the rear of the unit or even drilling a hole in the back of the  
> cabinet. That is extremely hard to remove if too much solder is applied  
> and if the holes are not cleaned out, pushing it into a rack could  
> break out the connector on the back of the radio.

I sympathize with you, since I have several that are awaiting racks if I ever find them (and I have been looking at every hamfest I attend for some 7 years now, with nil luck for that navy style big connector rack in any condition --- I was able to get an army rack out of Fair about 5 years back and use it for the small connector rigs).

The relay spring will bend nicely and is under almost no stress.

I had though long and hard about the problem, since I also don't like to cut up an unmodified rig, if any way is possible otherwise.

After much playing around with ways of clipping the thing with a small alligator clip jumper to make the connection I inadvertently rolled the spring contact around, one day, and it easily rolled around to well beyond the binding post (remember that the design of the contact IS to swing like a clock spring, so it has a great deal of angular rotational freedom --- moving the contact around to the back side of the binding post places no extra stress on it at all).

> Albeit I don't have better ideas at this time other than finding a rack  
> \*next to impossible unless ur in the right place at the right time\*  
> Rather than disfigure the radio perhaps someone has one similar or one  
> that is on the ham bands right now that has been modified already.  
> Unmodified command sets are quite rare and a pleasure to find. I  
> understand that it is a criminal offense among the cmd set collector  
> society to modify or disfigure one unless it has been previously done  
> so. The penalty is extremely harsh and I can't recite all the  
> provisions that would apply to u should u undertake such a  
> project.((;>) \*grinningly he said\*.

My two mods do not disfigure the radio in any way in my hands.  
That is why >>> I <<< use them! The rig can be returned to original in short order, with no disfigurement to it at all.

I have soldered and unsoldered them many times on various rigs, and never had any problem getting the thing back to mating with a rack, at all. The secret is to use just the minimal tinning amount of solder to sweat the contact together between the receptacle plug pins and the wires. It works fine. If in doubt, try it on one of your hacked up chassis. At the very worst, all that is needed to clean the receptacle plug pins out are a run through with a pipe cleaner dipped in flux under a hot soldering iron to wick out any remaining traces of solder.

> I bring this up because I collect the things and an unmodified unit is  
> a charm to behold. Seems like 90 percent of mine have already been  
> modified in one way or another as described in the various \*Command  
> set\* pubs.

I collect them likewise, and always prefer the minimal mod necessary to bring a rig online, as close to original as possible. I tend to be more of a user than a shelf duster, though, so I am willing to make some few minimal mods to a rig that is not of significant historical scarcity (the ARC-5 gear is not of significant scarcity, even now, except for those darn connectors..... (:+{f{.....). There is pro and con on this.

> I run about 420 on the plates in cw mode, key the oscillator cathode  
> and see about 30 watts out to a bird wattmeter. I've read several  
> places \*see above\* that 200-210 volts regulated will do an amazing job  
> with stability. That doesn't mean that all the problems will be solved  
> though. Key click filters and tvi protection are a couple of other  
> items that may keep ur coax all in one piece. I'm sure there are other  
> additions to what I've inserted here and without the books, the list of  
> conversions can be long.

I run one on 150 volts DC regulated for a vfo, and it works fine, also  
using just my two mods, and it gets just a little under 5 watts output.

The rigs are very stable, regardless of the voltages used in the  
range of 100-500 volts. At beyond 550 volts they can get a bit  
squirrely without precautions, and that is too much for the rig anyway.

Key click filters and tvi filters are not really required if the mods  
I suggest are done and the thing is kept original. At the worst,  
a touch of keying lag to the amplifier cathodes would cure any  
clickitis. But, that would be modifying an unhacked rig. No joy.

I am curious how you get 30 watts out on 420 volts. The rig is rated  
at 15-25 watts on 550 volts. The best I can get out of them stock is  
about 25 watts, pushing a bit harder than I like. I feel comfortable  
at 15-20 watts out with them.

Already this has told me that you are running the rig at reasonable  
voltages, but why are you cathode keying them? The original plate  
keying works just fine if you properly sequence the keying relay under  
the chassis to allow the oscillator to make and come up to speed before  
the amplifier is keyed --- a sort of differential keying. The stock  
relays often were a bit out of tolerance on this, so each one needs  
to be checked when the rig is brought on-line to make sure the oscillator  
keys first and then the amp. There is usually a very slight adjustment  
to the relay arms that is required (and was commonly done in the old  
days for all kinds of relays in keying circuits). It does no harm to  
the relay and is a must for proper keying. Failure to sequence that  
relay properly will give rise to the classical ArcusFivusChirpus,  
I guarantee.....(:+{} }..... This is also true with MOST military gear  
of that era. Properly sequenced, most will key nicely. Improperly  
sequenced and one has the classic BC-375 signal (and even it will  
key beautifully if its relay is properly sequence --- instructions are  
in the depot repair manual).

> This is not inteded to be a flame, merely the bringing to attention of  
> concerning the scarcity of unmodified units. Bob, ur probably in good  
> shape concerning the least modifications necessary to get the thing on  
> the air.





Jim - km6nk

From boatanchors@theporch.com Sat May 6 02:07:44 1995  
Date: Fri, 5 May 1995 21:07:44 -0500  
Message-Id: <Pine.SUN.3.91.950505075904.15865B-1000000@eiger.ceet.niu.edu>  
From: Steve Berg <berg@eiger.ceet.niu.edu>  
Subject: Re: Holes in Prongs

Gee, all of that r&d for nothing. I always assumed that they were there due to some effect of hole/electron movement. Some of the holes were caught entering and leaving the power cord and were frozen there on the plug prongs.

73,

Steve WA9JML

From boatanchors@theporch.com Sat May 6 02:24:08 1995  
Date: Fri, 5 May 1995 21:24:08 -0500  
Message-Id: <Pine.3.89.9505050821.A7527-01000000@netcom12>  
From: paul Veltman <veltman@netcom.com>  
Subject: Magazine Article Index

Ok Ok,  
Boy, you guys are going to make me look for that magazine??

Now, let's see. I know I left it someplace. Ah Ha, the first place to look is in that room for reading and contemplation. No, not there, but there's that old Civil Engineering text that I've been looking for.

Well sir, now let's see if I can get into the shack. There, a shoulder to the door does the trick. Now I can squeeze in through the narrow opening in the door that was created before the resistance of all that junk in the shack overcame my strength. You know, if I took all these Burgie cans to the recycler, I'd have enough money for a new HRO-50. Lets see now, Oh! here is my design of a 80 meter beam that fits in your pocket and has 35db gain. When I write the ad for the hammymags, I won't specify what the 35db is in reference to. That will mean I won't have to lie about the gain numbers, but all the suckers --er customers-- will think that it's dbd rather than dbokq. But I did get a 5-9-9 signal report from 4 blocks over.

Ah Ha, there it is, under all the CQ mags from 1958 when that was a good hammymag, and the issue of 73 that looks like a Playboy, and that letter from G. Marconi thanking me for helping him discover the joys of Ham Radio.

The article was written in the Comm. Quarterly magazine by AA1IP. This program is called From Beverages Thru Oscar. It was compiled by Rich Rosen, K2RR and claims over 60,000 entries from 297 sources. Publication dates range from 1901 to December, 1990. Oh, good, it runs under DOS, not Windows(barf). If you're running a Maggotbox, I guess you're out of luck. I wonder if they have articles from Radio News. The price is \$85.00. To get your copy, contact:

DiDah(cute) Publishing  
P.O. Box 7368  
Nashua, NH 03060.  
(603) 878-3628

Now, will one of you please tell me why all these publishers like New Hampshire? It seems like hammymag publishers like that state.

73

Paul WA6OKQ

From boatanchors@theporch.com Sat May 6 02:06:47 1995  
Date: Fri, 5 May 1995 21:06:47 -0500  
Message-Id: <199505051227.IAA27549@hTS001.Cin.IX.net>  
From: "Harold K. Eberenz" <heberenz@TS0.Cin.IX.net>  
Subject: Old Receiver Info

I have acquired a 50 year old Telefunken short wave receiver. Any idea of how to have repaired, made usable???

From boatanchors@theporch.com Sat May 6 02:20:55 1995  
Date: Fri, 5 May 1995 21:20:55 -0500  
Message-Id: <199505051509.IAA04397@ix2.ix.netcom.com>  
From: w0ogh@ix.netcom.com (Larry Godek)  
Subject: Rec Diversity

For those of you mult multi equipment/tower/antenna/acres of land for antennas propagators of the electrons, If you are interested in diversity reception, homebrew style, on page 13 of the January 1948 CQ magazine is an article called "The "FLIP-FL0P,'An Effective Diversity

Adaptor". Homebrew and uses 4 tubes, a pair of 6AC7 and a pair of 6SC7. Neat looking lil chassis there.

Larry W00GH

From boatanchors@theporch.com Sat May 6 02:12:22 1995  
Date: Fri, 5 May 1995 21:12:22 -0500  
Message-Id: <PMX-TERM-2.02-bsm2ee1-thaake-130>  
From: thaake@bsm2ee1.attmail.com (thaake)  
Subject: SPLINE KEYS

The spline key question came at a good time. I called Jensen tools since my last set of spline keys were supplied in a toolkit packaged by them.

They have part number 79B055 Spline Keys \$6.95 listed in their main catalog. It appears by the description to be a 10 piece set, .033-4, .048-4, .048-6, ..060-6, .069-4, .072-6, .076-4, .096-6, .111-6, 113-6. These are the short arm key sets.

Xcelite is suppose to have a spline sete made to fit the Xcelite handles. It is suppose to be in the \$30 dollar range. Expensive but certainly more convenient than the short arm variety when working inside a radio. Jensen didn't respond to that request. I will check with SK Tools today and find out what they have, let you guys know when I know.

FYI, the Jensen Toll-Free number is 800-426-1194.

Tim WA0TSY  
thaake@bsm2ee1.attmail.com